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<110> F. HOFFMANN-LA ROCHE AG

<120> PROCESS FOR THE MANUFACTURE OF CAROTENOIDS AND
BIOLOGICALLY USEFUL MATERIALS THEREOF

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Asp Leu Phe Asp Ala Ile Lys Asn Gly Asp Phe Pro Ser Trp Thr Val	
145 150 155 160	
cag gta cag gta atg tct cct gag cag gcc cag aag ttc aga tac aac	528
Gln Val Gln Val Met Ser Pro Glu Gln Ala Gln Lys Phe Arg Tyr Asn	
165 170 175	
att ctg gat ctc acc aag gtc tgg tcc cac aag gag ttc cca ctt agg	576
Ile Leu Asp Leu Thr Lys Val Trp Ser His Lys Glu Phe Pro Leu Arg	
180 185 190	
acg att gga aag ttc act ttg aac cga aac gtg gat aac tat ttc gca	624
Thr Ile Gly Lys Phe Thr Leu Asn Arg Asn Val Asp Asn Tyr Phe Ala	

Glu Glu Ala Ser Lys Leu Asp Ala Ser Asn Pro Asp Ser Asn Gly Asp
 130 135 140

Asp Leu Phe Asp Ala Ile Lys Asn Gly Asp Phe Pro Ser Trp Thr Val
 145 150 155 160

Gln Val Gln Val Met Ser Pro Glu Gln Ala Gln Lys Phe Arg Tyr Asn
 165 170 175

Ile Leu Asp Leu Thr Lys Val Trp Ser His Lys Glu Phe Pro Leu Arg
 180 185 190

Thr Ile Gly Lys Phe Thr Leu Asn Arg Asn Val Asp Asn Tyr Phe Ala
 195 200 205

Glu Val Glu Gln Leu Ala Phe Ala Pro Ser His Leu Pro Pro Gly Ile
 210 215 220

Glu Pro Ser Asn Asp Pro Val Leu Gln Ala Arg Leu Phe Ser
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 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
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 primer for cloning of SOD genes)

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23

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<220>
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23

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26

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26

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26

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<212> DNA
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<223> Description of Artificial Sequence:Cat5 (antisense
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<400> 17

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23